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Notable in *Neurology* This Week

This issue features a study that estimates the prevalence of patent foramen ovale in children with cryptogenic arterial ischemic stroke; another examines speech patterns in patients with Parkinson disease and how they change with dopaminergic therapy. A Review article describes how large-scale data-sharing and artificial intelligence can be used to monitor the progression and understand the mechanisms of multiple sclerosis using MRI.

Research Articles

Association of CT-Based Hypoperfusion Index With Ischemic Core Enlargement in Patients With Medium and Large Vessel Stroke

Hypoperfusion index (HI) can estimate ischemic core growth rapidly. This study found that an HI >0.5 can distinguish patients whose infarcts will progress at a fast or slow rate. The performance is similar in patients with medium- and large-vessel occlusions and at early (<6 hours) and late (6–24 hours) time windows. This may aid in patient selection for reperfusion therapy.

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CT Hypoperfusion-Hypodensity Mismatch to Identify Patients With Acute Ischemic Stroke Within 4.5 Hours of Symptom Onset

In this study, the presence of a CT hypoperfusion-hypodensity mismatch (the presence of an acute ischemic core visible on perfusion CT but with no visible hypodensity on the noncontrast CT) identified patients who were within 4.5 hours of stroke onset at the time of the scan with 94.2% sensitivity and 74.6% specificity.

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Natural History of Facioscapulohumeral Dystrophy in Children: A 2-Year Follow-up

This study followed 20 children with genetically confirmed facioscapulohumeral dystrophy (FSHD) over 2 years to better understand the disease's progression. The clinical FSHD score and muscle ultrasound appeared to be promising outcome measures. The findings may be used as baseline measures for treatment trials in childhood FSHD and for counseling patients about the expected progression.

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Continued

Tissue 2-Hydroxyglutarate and Preoperative Seizures in Patients With Diffuse Gliomas

In patients with diffuse glioma who underwent surgery, researchers assessed the presence of preoperative seizures, tumor location, histopathologic diagnosis, isocitrate dehydrogenase (IDH) 1/2 gene status, and 1p/19q codeletion. An association between high tissue 2-hydroxyglutarate (2HG) concentration and preoperative seizures suggested that high 2HG increases the risk of preoperative seizures in patients with IDH1/2 variation tumors.

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NB: "Perivascular and Subarachnoid Fluid-Attenuated Inversion Recovery Hyperintensities Related to Delayed Gadolinium Leakage After Stroke," p. 1000. To check out other NeuroImages, point your browser to [Neurology.org/N](https://www.neurology.org/N). At the end of the issue, check out the Resident & Fellow Section Clinical Reasoning article discussing acute psychosis in a patient with vitamin B₁₂ deficiency, and a Resident & Fellow Section Pearls & Oysters article on mitochondrial encephalopathy, lactic acidosis, and stroke-like episodes syndrome. This week also includes a Resident & Fellow Section Teaching Video NeuroImage titled "An Uncommon Cause of Hearing Loss."

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Spotlight on the November 23 Issue

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Neurology 2021;97:969-970

DOI 10.1212/WNL.00000000000012900

This information is current as of November 22, 2021

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